

FIG. 1

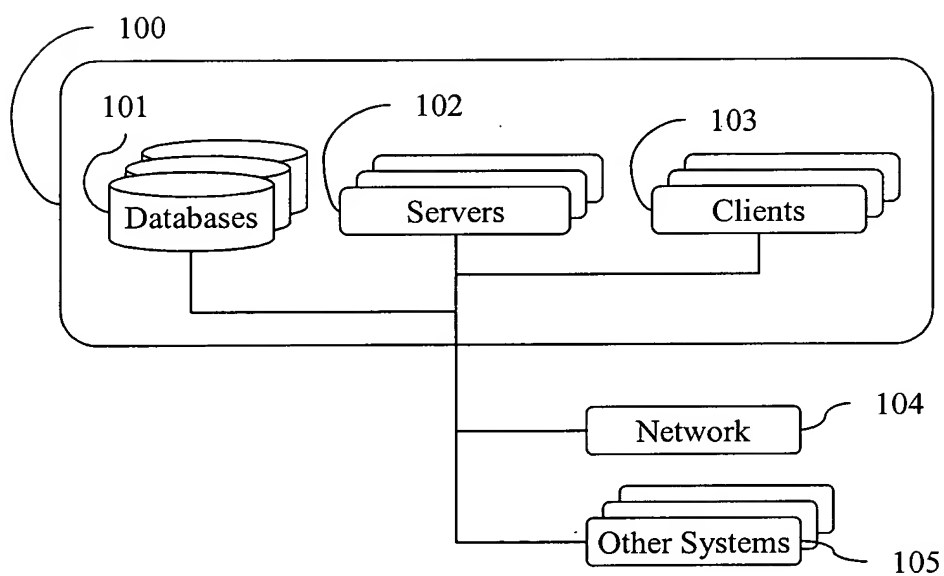
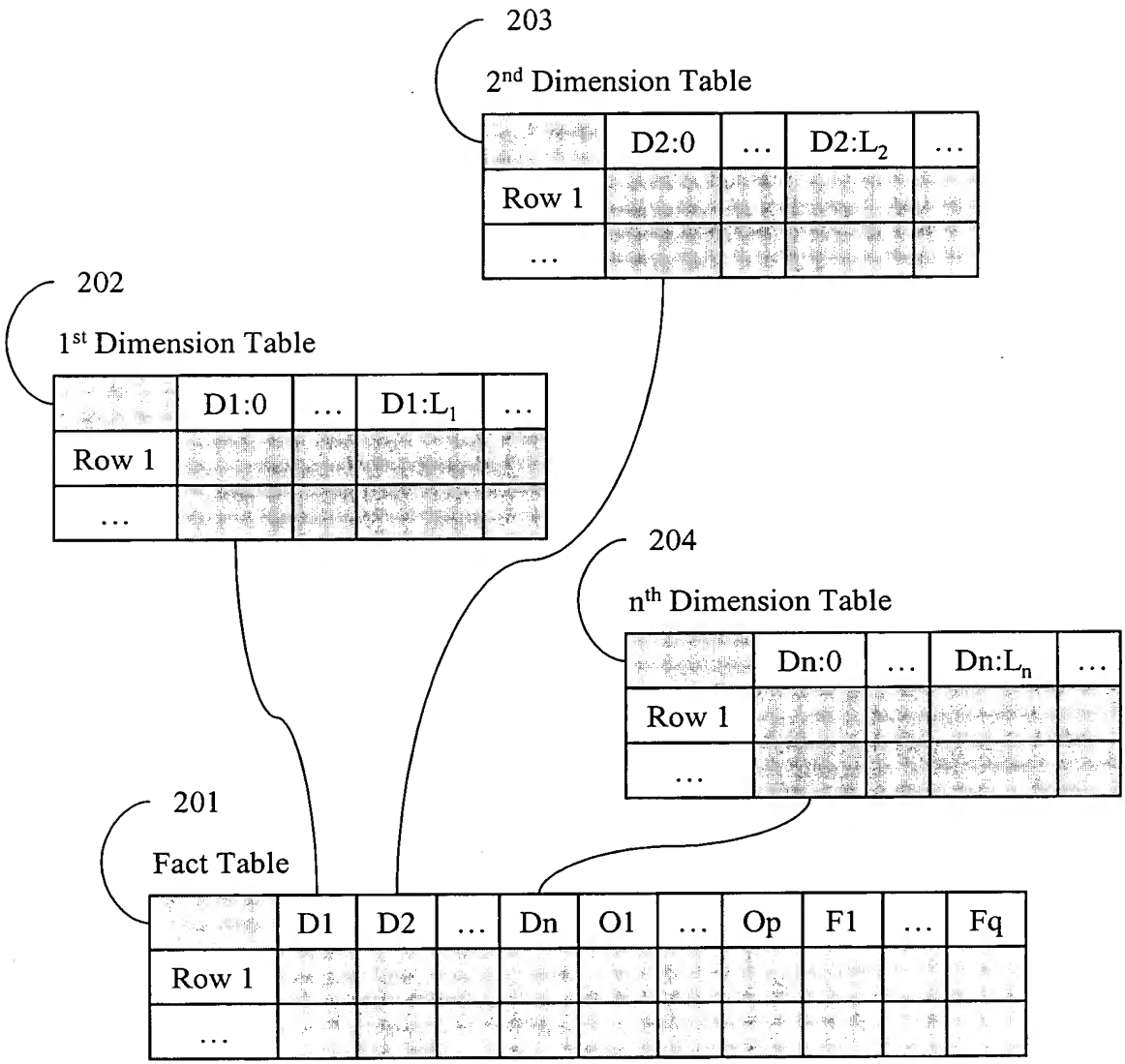


FIG. 2



2nd Dimension: Levels 0 – L₂

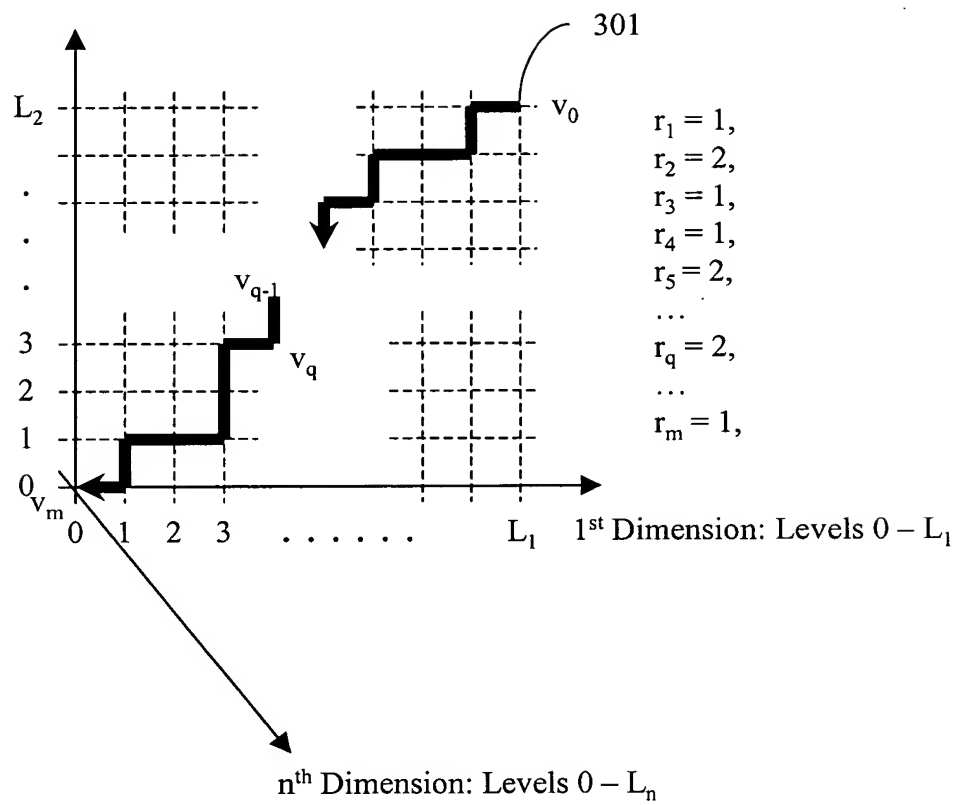


FIG. 4

401

i^{th} Dimension Table

	Di:0	...	Di: L_i	...
Row 1				
...				

402

During Rewriting of the i^{th} Dimension Table

	Di:0	Ri:0	...	Di: L_i	Ri: L_i	...
Row 1						
...						

403

After rewriting of the i^{th} Dimension Table

	Di:0	Ri:0	...	Ri:(L_i-1)	Di: L_i
Row 1						
...						

FIG. 5

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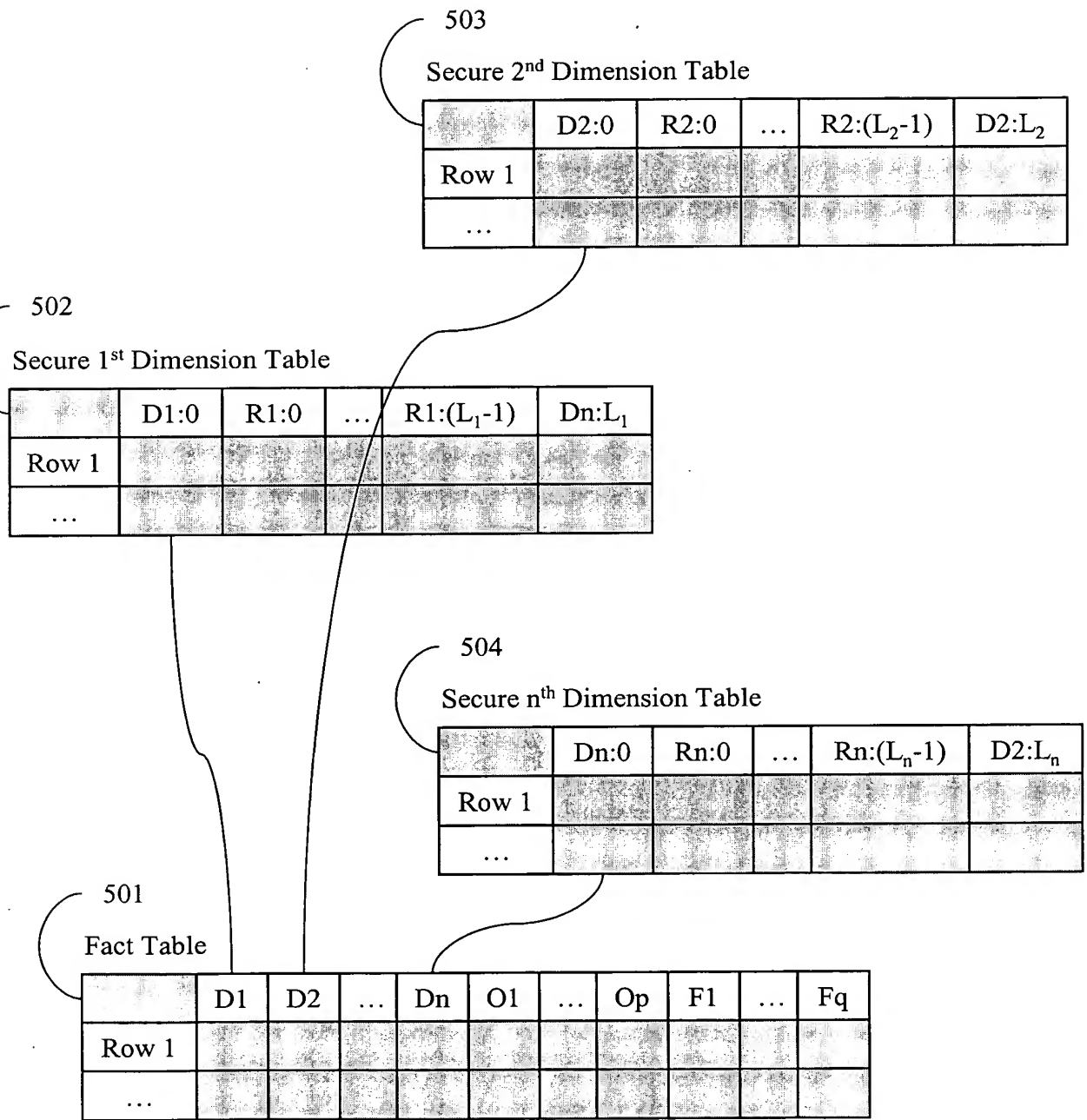
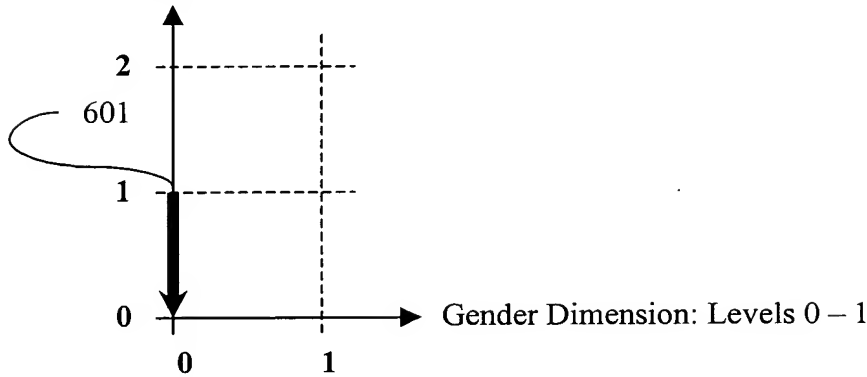


FIG. 6

Location Dimension: Levels 0 – 2



604

2nd Dimension Table: Location

Location Hierarchy	Level – 0 “City”	Level – 1 “County”	Level – 2 “State”
Row 1	Berkeley	Alameda County	California
Row 2	Oakland	Alameda County	California
Row 3	Palo Alto	Santa Clara County	California
Row 4	San Jose	Santa Clara County	California

603

1st Dimension Table: Gender

Gender Hierarchy	Level – 0 “Gender”	Level – 1 “All”
Row 1	Male	Males & Females
Row 2	Female	Males & Females

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Fact Table
Summary

Infections Study	Gender	City	Count(distinct ID)
	Male	Berkeley	2
	Female	Berkeley	7
	Male	Oakland	16
	Female	Oakland	15
	Male	Palo Alto	7
	Female	Palo Alto	6
	Male	San Jose	14
	Female	San Jose	12

FIG. 7

Original 2nd Dimension Table: Location Hierarchy

Level – 0 “City”	Level – 1 “County”	Level – 2 “State”
Berkeley	Alameda County	California
Oakland	Alameda County	California
Palo Alto	Santa Clara County	California
San Jose	Santa Clara County	California

New 2nd Dimension Table: Before Rewriting

D2:0	R2:0	D2:1	R2:1	D2:2	R2:2
Berkeley	Berkeley	Alameda County	Alameda County	California	California
Oakland	Oakland	Alameda County	Alameda County	California	California
Palo Alto	Palo Alto	Santa Clara County	Santa Clara County	California	California
San Jose	San Jose	Santa Clara County	Santa Clara County	California	California

New 2nd Dimension Table: After Step 1

D2:0	R2:0	D2:1	R2:1	D2:2	R2:2
Berkeley	Alameda County	Alameda County	Alameda County	California	California
Oakland	Alameda County	Alameda County	Alameda County	California	California
Palo Alto	Palo Alto	Santa Clara County	Santa Clara County	California	California
San Jose	San Jose	Santa Clara County	Santa Clara County	California	California

Secure 2nd Dimension Table: After Rewriting

D2:0 Reference to Fact Table	R2:0: Level – 0 “City” or “County”	D2:1: Level – 1 “County”	D2:2 “State”
Berkeley	Alameda County	Alameda County	California
Oakland	Alameda County	Alameda County	California
Palo Alto	Palo Alto	Santa Clara County	California
San Jose	San Jose	Santa Clara County	California

FIG. 8

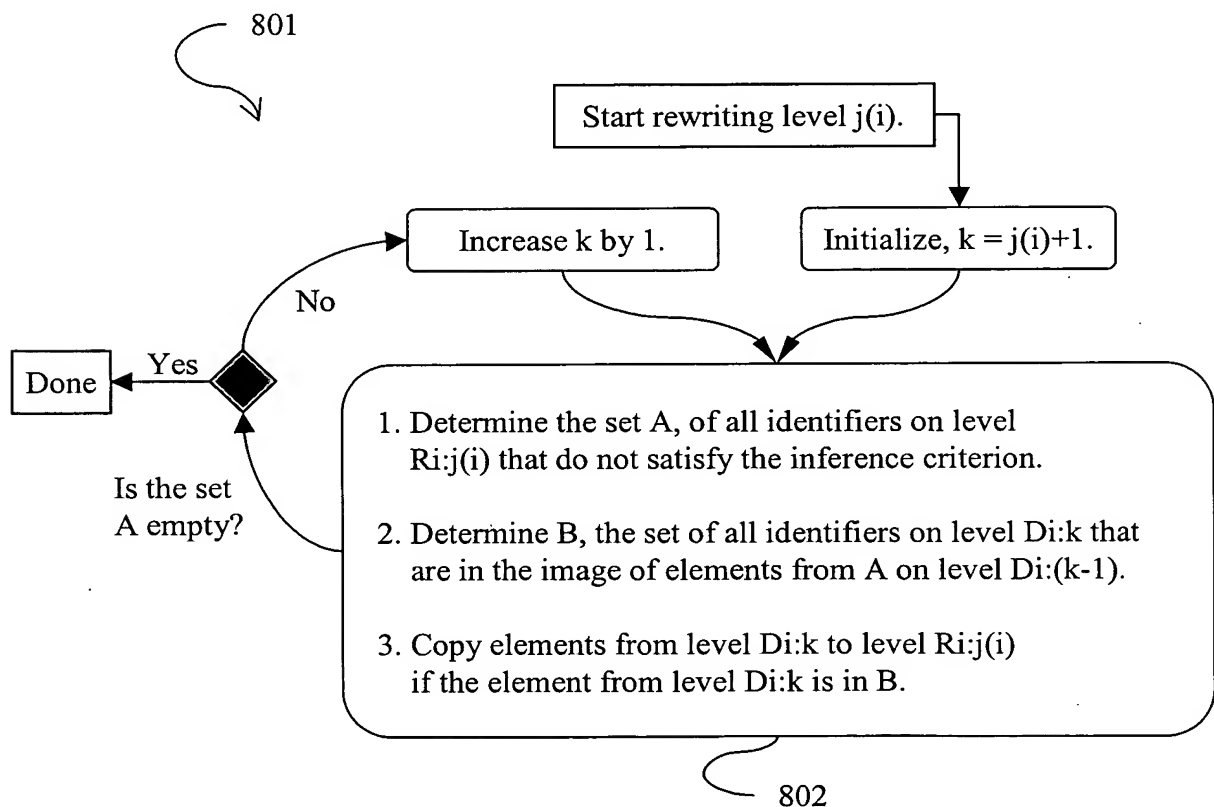
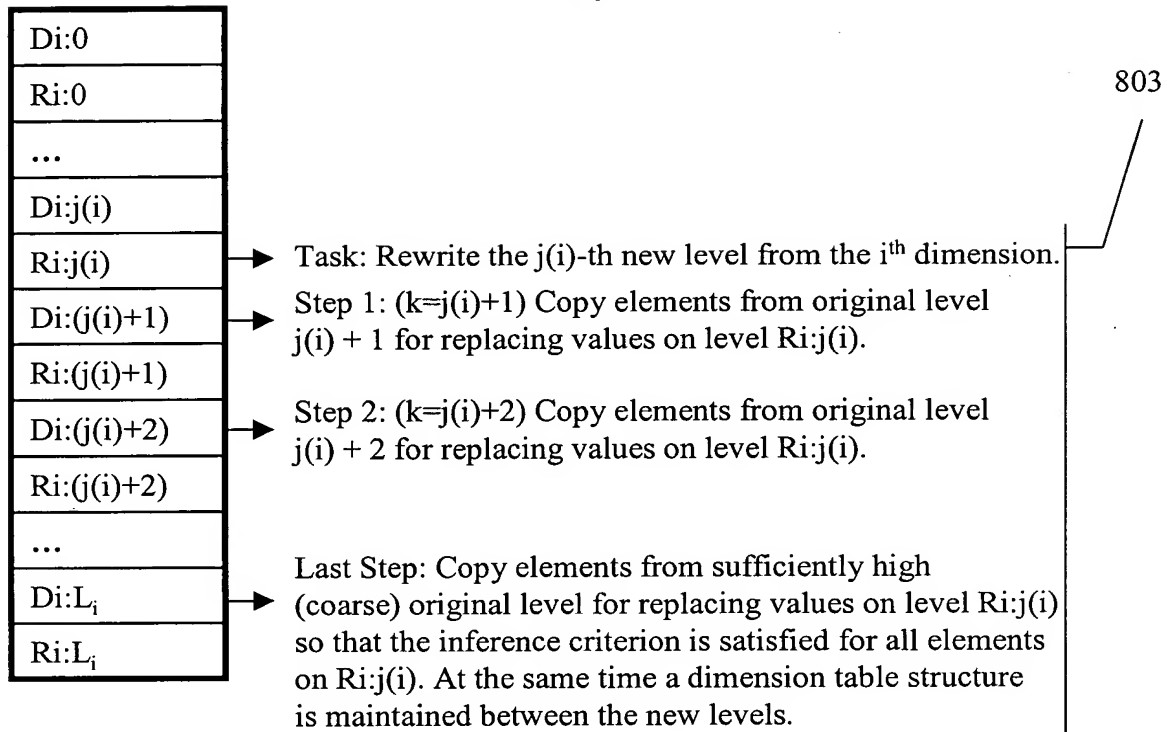


FIG. 9

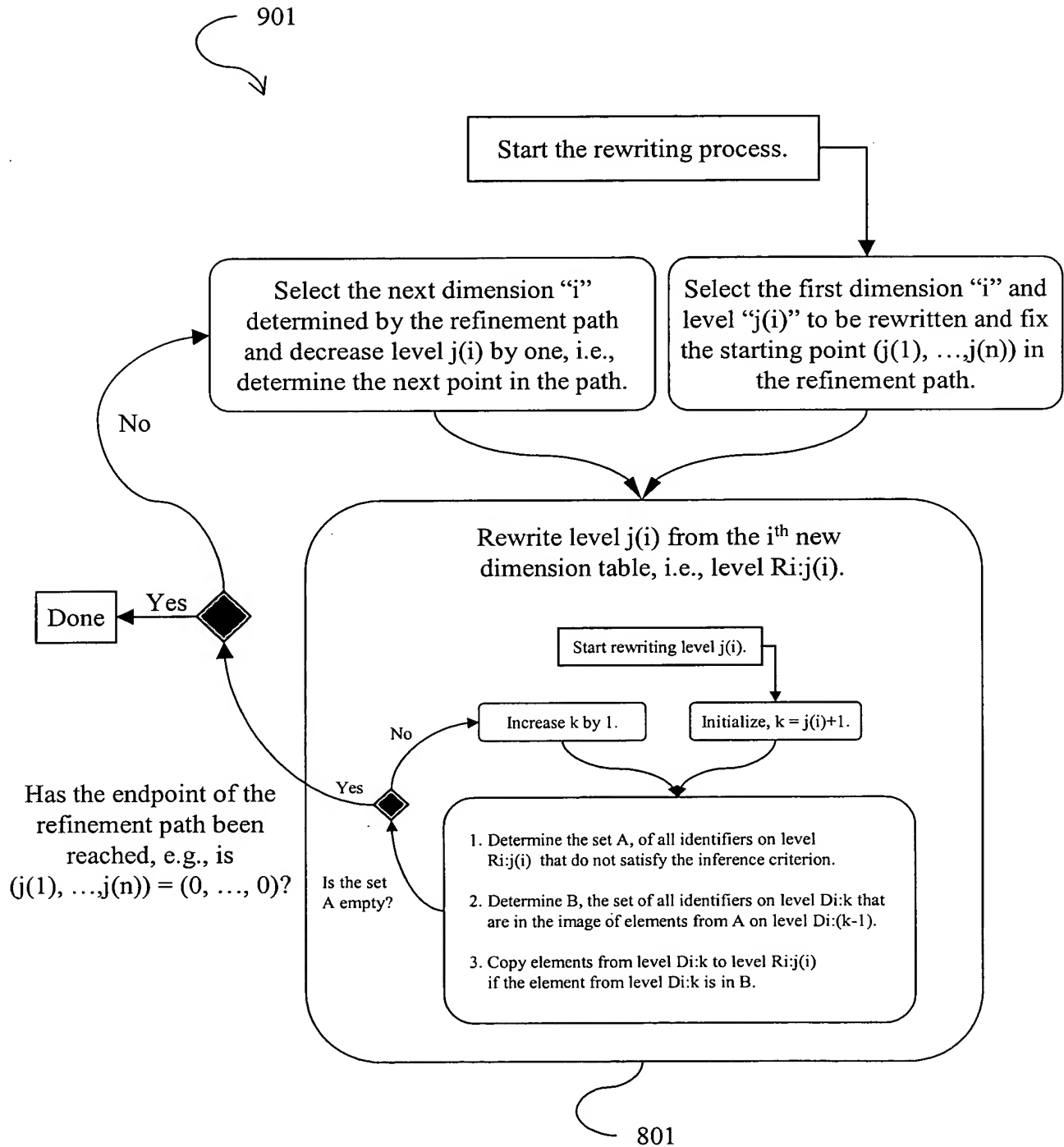
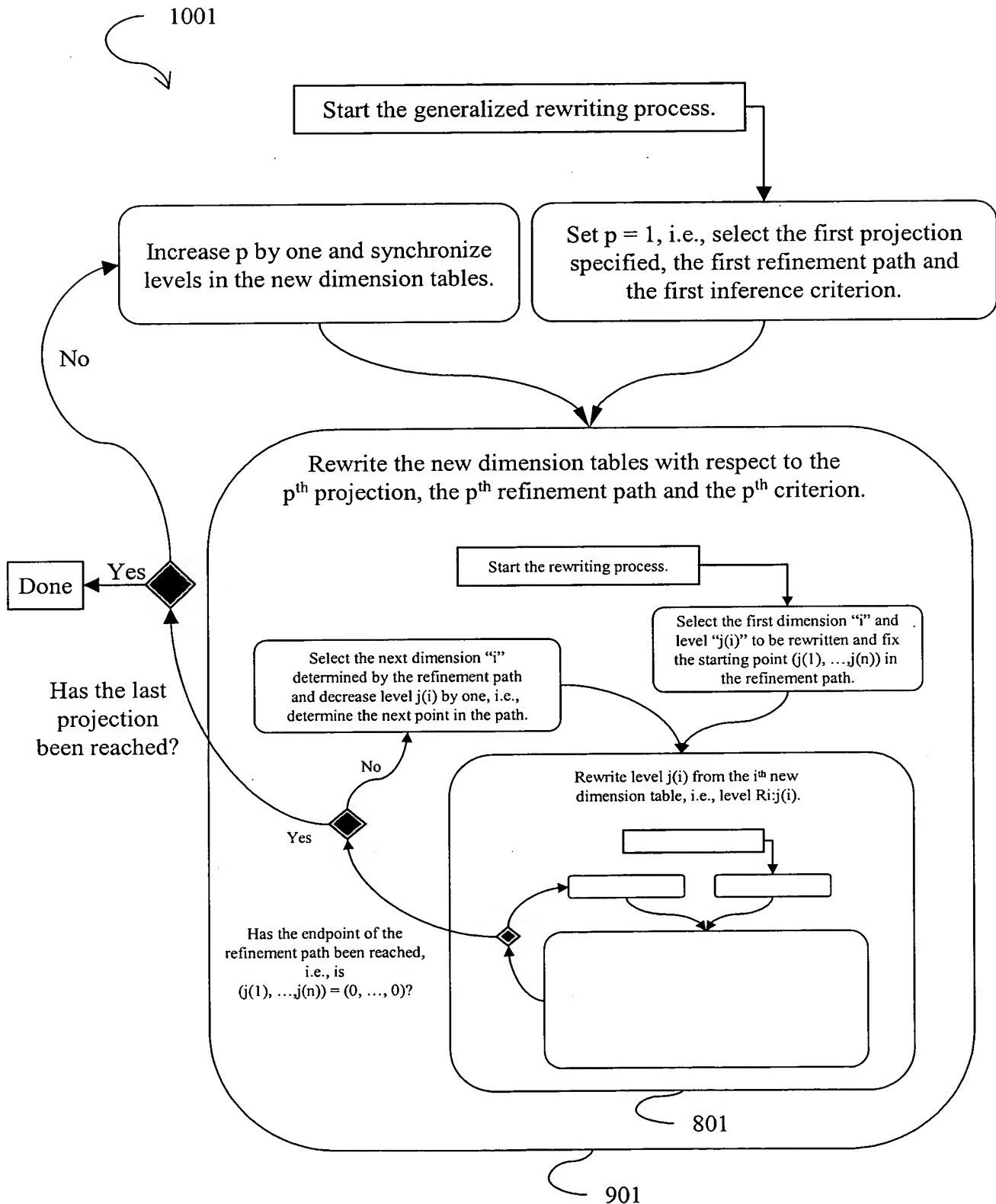


FIG. 10



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